

DOCKETED

Docket Number:	19-ERDD-01
Project Title:	Research Idea Exchange
TN #:	230468
Document Title:	Advanced Power and Energy Program Comments - Fuel Cell Applications at Ports
Description:	N/A
Filer:	System
Organization:	Advanced Power and Energy Program
Submitter Role:	Public
Submission Date:	10/31/2019 4:21:39 PM
Docketed Date:	10/31/2019

*Comment Received From: Advanced Power and Energy Program
Submitted On: 10/31/2019
Docket Number: 19-ERDD-01*

Fuel Cell Applications at Ports

Fuel cells can be used in ports both in stationary and mobile applications. Fuel cells can provide the ports primary or back-up power, and they can also provide motive power to mobile goods movement technologies such as various cargo handling equipment (forklifts, yard tractors), and heavy duty vehicles. Thus, in order to achieve energy and environmental goals, it is necessary to approach the problem from a systems point-of-view and to include stationary fuel cells in addition to mobile applications. Furthermore, it is necessary to include hydrogen production, procurement, and station siting in the analysis to ensure that emission reduction targets are met, and required infrastructure will be available for the upcoming fleet of fuel cell powered technologies. This approach will also help reduce the reliance of the port on the grid and increase reliability and resiliency of service.

Locomotives and commercial harbor crafts were identified as major emitters of diesel particulate matter in the presentation, and both are major targets for fuel cell power. While fuel cell power blocks are currently being designed for such applications, replacing current CHEs with fuel cells and deploying fuel cell trucks are an immediate opportunity as an appropriate first step in deploying fuel cell technology.